

## WEATHER OF THE MONTH.

## WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

## GENERAL CONDITIONS.

By ALFRED J. HENRY, Meteorologist.

Pressure at the two Pacific stations, Midway and Honolulu, also in the Aleutian regions and at Nome, Alaska, was for the most part below normal. On the south coast of Alaska and to a less extent in the interior, pressure was above normal practically the entire month after about the 7th. Such a pressure distribution would seem to indicate that cyclonic depressions which normally develop in the Gulf of Alaska and move thence to the southeast moved to the northeast as disturbances of little intensity.

The outstanding feature of cyclonic distribution in the United States was the failure of such storms to move inland from the Pacific and thence southeastward over the Plateau and Rocky Mountain regions. Coupled with that failure, however, there was a marked tendency toward the development of intense cyclones over northeastern United States.

In general, the weather in the United States and Canada was appropriate to a winter month except that in two widely separate regions extreme conditions prevailed, a result directly traceable to the movement of cyclones as indicated in the previous paragraph. In Pacific Coast States there was an absence of precipitation which may seriously affect economic conditions in those States should the shortage of precipitation continue during March. In northeastern Atlantic Coast States, including the Canadian Maritime Provinces and eastern Quebec, stormy weather with heavy snow prevailed during almost 50 per cent of the time. In New England and New York heavy snow seriously interfered with transportation problems, and the month may be classed as of the "old fashioned winter" type.<sup>1</sup>

While there were no wide-spread and severe cold waves, freezing temperatures overspread Southeastern States, including Florida, toward the end of the month. The month as a whole was relatively cold east of the Mississippi and warm west of it.

## NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

The month opened with a pronounced fall in pressure over the region adjacent to the Aleutian Islands where previously, during the middle and last decades of January, it had been abnormally high. During the entire month there was rather marked atmospheric activity over the Pacific as compared with the preceding months of December and January, in which conditions were unusually quiet for the winter season.

The depression which overspread the region between the Aleutians and Hawaiian Islands during the early days of the month caused strong westerly winds and gales over the northern steamer routes from midocean westward to the Japanese Islands.

Mr. C. R. Jowsey, second officer of the British S. S. *Tahchee*, Capt. D. M. Mackenzie, from San Pedro for Yokohama, states that from longitude 141° W., to the Japanese coast there was a continuation of westerly winds

from force 6 to 10, with fierce squalls after passing the 180th meridian. Short intervals of light airs and calms, from 4 to 8 hours in duration, were experienced between blows, with bright, clear weather throughout day and night, except on approaching the coast, when cloudy and squally weather prevailed.

The principal disturbance of the month appears to have been that of the 9th-13th. Between those dates vessels near the 180th meridian experienced winds reaching the force of a whole gale. Mr. I. N. Barr, observer on the British S. S. *Ixion*, Capt. J. Inkster, from Yokohama for Victoria, states that at 2 a. m. on the 11th, after a vivid display of lightning in various quarters, a sudden gale from the northwest struck the ship. The wind attained its greatest violence about noon of the 12th, the vessel then being hove to in latitude 38° 28' N., longitude 151° 21' E. The gale was accompanied by terrific squalls and a very high sea, while a high swell from the northeast was continually running. Similar conditions were experienced on the 18th, when the *Ixion* was in latitude 49° 01' N., longitude 176° 17' W.

It is interesting to note that while there was greater atmospheric activity over the North Pacific Ocean in February than in either December or January the reverse was true of the North Atlantic Ocean, where, after two months of stormy weather, conditions moderated somewhat, as appears from the accompanying review of conditions over that ocean.

## NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month was slightly above the normal at land stations on the coasts of Newfoundland and Canada, while it was somewhat lower than usual on the coast of the United States and also in the West Indies and the Bermudas. In the neighborhood of the Orkney Islands the pressure was practically normal, while on the south coast of Ireland, in the English Channel, and in the Azores it was considerably above.

According to reports received, the number of days on which gales were observed over the steamer lanes was slightly less than usual, as they were not reported on more than five days in any one 5-degree square. In the square that includes Bermuda they occurred on four days, which is slightly above the normal for that locality.

Fog was apparently less prevalent than usual during the month over the entire ocean, and it was reported on only three days on the Banks of Newfoundland and adjoining region.

On February 1 and 2 moderate to strong southerly and southwesterly gales prevailed over the middle and eastern sections of the steamer lanes. On the former date the pressure was abnormally high on the American coast north of New York, as a number of stations reported barometric readings of 31 inches or over. On the 3d and 4th heavy weather continued in mid-ocean, and on the 4th two vessels between the 35th and 46th parallels and the 68th meridian and the American coast encountered strong easterly gales accompanied by high barometric

<sup>1</sup> See p. 78 above.

readings at the time of observation. The storm log from the American S. S. *West Alsek* is as follows: "Gale began on the 4th. Lowest barometer, 29.70 inches on the 5th. Position, 40° 20' N., 71° 00' W. End of gale on the 6th. Highest force, 10. Shifts of wind near time of lowest barometer, east to southeast."

The conditions on the 5th, 6th, and 7th are shown on Charts IX, X, and XI, respectively, and it will be noted that on the last two days unusually heavy winds prevailed in the vicinity of the Bermudas, with a well-developed low over the New England and Canadian coasts. On the 8th and 9th a number of vessels in mid-ocean encountered southwesterly gales, with a low central somewhere in the region between Scotland and Iceland, and an unusually steep gradient toward the south. The storm log from the Danish S. S. *Oscar II* is as follows: "Gale began on the 5th. Lowest barometer reading, 29.22 inches at 6 a. m. on the 7th. Position, 56° 20' N., 22° 48' W. End of gale at 8 a. m. on the 9th. Highest force of wind, 9. Shifts of wind, south to northwest through the east."

On the 11th moderate to strong westerly gales prevailed over a limited area between the 40th and 45th parallels and the 40th and 50th meridians, and at the same time there was a deep depression over the Scandinavian coast. On the 12th and 13th the conditions were comparatively featureless, with slight pressure gradients and light to moderate winds over nearly all the ocean, although on the latter date the station at Bermuda reported a southerly gale of about 50 miles an hour. On the 15th, as shown on Chart XII, there were three well-developed lows over the ocean, with gales prevailing over the greater

part of the steamer lanes east of the 50th meridian. During the next two days all three disturbances decreased somewhat in intensity, although on both the 16th and 17th southerly gales were encountered over the northeastern section of the ocean, and on the 16th southwesterly winds of gale force occurred off the New England coast. On the 19th there was a low central about 200 miles east of the Virginia Capes, and heavy northwesterly winds were reported in the southwesterly quadrants. From the 20th to the 25th light to moderate winds prevailed over practically the entire ocean, although during that period a few vessels in widely scattered localities reported moderate gales.

On the 26th (see Chart XIII) a well-developed low was central near the west coast of Newfoundland, while southerly and southwesterly gales swept the steamer lanes west of the 40th meridian. As shown on Chart XIV, this disturbance moved but little during the next 24 hours, decreasing in intensity, and by the 27th the storm area had contracted considerably in extent. The conditions on the 28th were practically the same as on the previous day, while on the 29th the low had apparently filled in, light to moderate winds being the rule over the greater part of the ocean. The Danish S. S. *Oscar II* reported a westerly gale of over 60 miles an hour while near latitude 56° and longitude 24° on the 29th, and the storm log from this vessel is as follows: "Gale began on the 26th. Lowest barometer, 29.25 inches at 4 a. m. on the 29th. Position, 53° 30' N., 27° 30' W. End of gale on the 29th. Highest force of wind, 10. Shifts of wind, southeast to west-southwest."

### NOTES ON WEATHER IN OTHER PARTS OF THE WORLD.

*Nova Scotia*.—Sydney, February 23.—Supplies for the inhabitants of the Magdalen Islands, icebound and on limited rations for several weeks, have been landed on Grindstone Island, one of the group, according to a wireless message received here from the government steamer *Montcalm*.—*Washington Star*.

Halifax, February 18.—Arctic ice packs, covered with walrus, seals, and other polar creatures, are the largest within memory, according to reports brought here by sailors and overland travelers.

The solid ice extends farther south than at any time within years, with the bays and inlets fringing the Newfoundland coast, locked tightly. Newfoundland railroads are completely tied up and inhabitants in the interior are suffering intensely. Communication between settlements is impossible except by dog sleds.

Reports of a strange malady have been received from Gander Bay, which is without a physician. The disease is an affection of the throat and has claimed many lives.—*New York Times*, February 19, 1920.

*British Isles*.—February was characterized by a mean temperature decidedly in excess of the normal, a moderate amount of sunshine, and an absence of the boisterous conditions which prevailed in January. \* \* \* The general rainfall expressed as a percentage of the average was: England and Wales, 77; Scotland, 164; Ireland, 89; British Isles, 112.

In London (Camden Square) the mean temperature was 43°, or 3.3° above the average, it being the third successive month with an excess of more than 3° F.<sup>1</sup>

*France*.—In western Europe the rainy and stormy weather of January continued during the month, though with less severity. The heaviest rains occurred in association with a depression which passed from Portugal

to the Mediterranean. At Perpignan, on the north side of its path, 25 mm. and 48 mm. of rain were measured for consecutive days, the 19th and 20th. Floods were subsequently reported at many places in the south of France. High temperatures occurred on the Continent, as in the British Isles, on the 17th, when the maximum at Strasbourg was as high as 69° F.<sup>1</sup>

*Madeira*.—Phenomenal rain fell at Madeira on the 25th and 26th, the total fall of 48 hours being 213 mm., or 8.5 inches.<sup>1</sup>

*Turkey*.—Constantinople, February 24.—A heavy snowstorm has been beating down on us for the last three or four days without ceasing; the streets are knee deep in soft snow, and since most of the houses have few facilities for heating and less fuel to make use of these with, we are all cold and shivering and miserable.—*New York Evening Post*, March 27, 1920.

*Palestine*.—The worst winter ever recorded is being experienced in the Holy Land and the whole region to the east of the Mediterranean. In Jerusalem there was a fall of 39 inches of snow [the greatest since 1860].<sup>1</sup> Great distress was caused, as the people are not prepared to resist such weather. Communication between Jerusalem and Cairo was interrupted for a week.

During the recent storms the historic tree in the Garden of Gethsemane known to the Arabs as "El Bustini" was blown down. According to local tradition the fall of this tree would presage the fall of the Turkish empire. The Turks, in order to head off such a bad sign had kept the tree bound up with iron braces, but the heavy snowfall was too much for the old tree and it was prostrated. Now the word is spreading among all the people that the long-predicted end of Turkish rule is close at hand.—*The Pathfinder*, Washington, March 6, 1920.

<sup>1</sup> The Meteorological Magazine (London), March, 1920, pp. 31 and 36.